DOCUMENT RESUME

ED 090 458 CG 008 849

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TITLE Peer Helping Relationships: An Ecological Study of an Elementary Classroom.
PUB DATE Apr 74
NOTE 28p.; Presented at the Annual Meeting of the American Educational Research Association (59th, Chicago, Illinois, April 1974)

EDRS PRICE MF-$0.75 HC-$1.85 PLUS POSTAGE
DESCRIPTORS *Cross Age Teaching; Group Relations; Helping Relationship; *Peer Relationship; *Peer Teaching; Research Projects; *Self Directed Classrooms; *Student Centered Curriculum

ABSTRACT

The purpose of this study was to conduct an ecological study of a self-contained classroom of 8-, 9-, and 10-year-olds in order to: (1) define various techniques through which students offer help to and receive help from peers; (2) identify the types of situations under which these different types of peer helping relationships are likely to occur; and (3) determine correlations between type and frequency of helping behavior and sociometric status, attitude toward school, and achievement. Students were found to vary widely in their ability to work with peers. However, results indicate that engaging in peer helping relationships does seem to have some positive effects in relation to school attitude, peer acceptance, and self-esteem. (Author/HMV)

25.08

ED 090458

PEER HELPING RELATIONSHIPS

AN ECOLOGICAL STUDY OF AN ELEMENTARY CLASSROOM

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Presented at the American Educational Research Association Annual Meeting,
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PEER HELPING RELATIONSHIPS
AN ECOLOGICAL STUDY OF AN ELEMENTARY CLASSROOM

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This study was based on the proposition that students form a valuable, but generally untapped, educational resource within the classroom. To test this position an ecological study, of a self-contained classroom of eight, nine, and ten year olds, was designed to: (1) define various techniques through which students offer help to and receive help from peers; (2) identify the types of situations under which these different types of peer helping relationships are likely to occur; and (3) determine correlations between frequency of helping behavior and sociometric status, attitude toward school, and self concept. Evidence from several sources have converged to support the need for a study of this nature.

There is more to school than meets the eye of the casual observer. In addition to meeting the formal requirements of the curriculum, students must also learn how to deal effectively with the social system. Consensus appears to occur early (10) in the school year on where each pupil falls in a status hierarchy within a classroom. And, these positions tend to be stable throughout the school year. At the same time, evidence has accumulated (4) that position within the classroom social system can have a profound effect upon the learning of individual students. A student's perception of his position within the classroom status hierarchy has been found to be a significant determinant of behavior, more so even than his actual sociometric position. This cognized position within the

interpersonal social structure influences utilization of academic ability, self-concept, and attitude toward school (14, 15).

Students at the two extremes in the status system receive differential responses from both peers and teachers. In one study, which focused upon the structural effects of the classroom on the mental health of students (10), teachers indicated that the amount of warmth received by a pupil from peers varied by social status with those at the top receiving the most positive affect. In the same study, observers noted that "...teachers pay attention to the social behavior, rather than the performance behavior, of low status pupils more often than of high status pupils....Low status boys tend to receive more criticism than their high status boy classmates; but low status girls receive more support " (10,p.214). The alienated student, at the bottom of the heap, is likely to respond to his low status by participating in classroom activities in inappropriate ways thus confirming the negative responses of others (self-fulfilling prophesy). The high status students, on the other hand, are likely to receive feedback which enhances their motivation to achieve.

Students of varying status thus experience the same classroom in widely differing ways. The room that may be warm and inviting to one student may be threatening to another. Compounding the problems associated with status are those of position within the classroom communication network. Studies (4, 9) have reported the extent to which communication within a classroom is dominated by the teacher, with more than 75 percent of this communication (4) being directed to a small, centrally located group of pupils. Jackson (9), in a study of flow of communication within four sixth grades, found that in each room there was a group of pupils

who were almost invisible -- they came close to having no interactions with the teacher. "For at least a few students, individual contact with the teacher is as rare as if they were seated in a class of a hundred or more pupils, even though there are actually only 30 or so classmates present" (9, p. 210).

Findings from these and other studies merge to indicate that those students who sit in the back of the classroom tend not to engage in question-answer exchanges with the teacher. At the same time, it has been found that those students who actively participate generally learn more than those who are passive. This comes as no surprise when studies on small-group behavior have repeatedly found that participating members are more accepted by others and benefit the most from the knowledge, skills, and abilities of the other group members. These findings suggest that means should be explored to provide opportunities within the classroom for students to engage in mutual exchange of information and ideas.

One successful approach to encouraging students to become actively involved in the educational process has been the institution of various types of peer tutoring programs. While initial programs had a tendency to use "good" students as tutors, the 1960's witnessed increased use of "poor" students in this capacity. It was found that through active involvement in helping another learn, tutors as well as tutees, demonstrated increases in academic achievement and at the same time evidenced more positive attitudes toward learning in general. In a study of cross-age tutoring reported by Dillner, Lippitt and Lohman indicated "...several factors contribute to the success of cross-age tutoring on the tutee.

The tutor communicates more effectively with the younger child because he speaks the learner's language. The performance of the older child provides a more realistic level of aspiration for the learner than the skills and standards of the adults which seem beyond the learner's grasp. The older child is less likely to be perceived as an 'authority figure' with its inhibiting effects on pupils who have had unfortunate experiences with authority" (6, p. 14).

But for all of its benefits there are several problems inherent in peer tutoring programs. Tutoring programs have all had in common the structuring of the peer helping relationship by an adult. This process has included the selection by an adult of the skills to be taught, the pupil to receive this instruction, and the one to provide it. Such a program requires time to structure and coordinate its various components. Time which may not be available to regular instructional personnel. And while these tutoring programs provide valuable remedial service to a number of pupils, because of their very nature, they cannot hope to reach all those who need personalized attention. As an additional consideration, tutoring programs tend to be adjunct to the regular classroom. This fails to take into consideration the growing body of research on the relationship between the social role played by a student in a classroom and his learning behavior.

Open classrooms have been hailed as an approach to increase student interaction and active involvement in the learning process. Unfortunately, many such classrooms are merely rearrangements of physical space with student roles having remained constant. The focus in these programs has not been upon the academic advantages which may be accrued through in-

creased student interaction rates or the encouragement of spontaneous helping relationships. As a consequence, research which has been conducted on the open classroom has generally limited itself to comparing the achievement of pupils in this type of setting to those in traditionally structured rooms. Out of a discussion on nongraded classrooms comes an observation which seems apt here: "One searches in vain among countless reports on the nongraded school for any sophisticated examination of cross-age interaction, or even for any recognition of its educational potential. Reliable evidence on the academic effects is also lacking" (7, p. 335).

It appeared to the authors that the encouragement of helping relationships among students would be an efficient and effective method of individualizing instruction whether in a self-contained or open-space classroom. The active involvement which this type of program would engender should, according to theory, act as a stimulus to learning. Helping relationships, for the purposes of this study, are described as the giving or receiving of assistance. These relationships may be pupil-pupil or pupil-teacher interactions.

Methods

Subjects and Setting:

This study was conducted in a self-contained classrom of 30 students aged eight through ten in a k-12 laboratory school of a large Southeastern university. Both the classroom and its program were organized to encourage students to assume responsibility for their own learning. The room was without the traditional desks and chairs found in most class-

rooms. Instead, it was furnished with an assortment of tables and chairs, two couches and a variety of well-worn stuffed chairs obtained from the University's used furniture outlet. This furniture was arranged to provide space for students to work individually or in small groups.

The class assembled as a total group three times a day: first thing in the morning, before lunch, and before leaving in the afternoon. The program itself was structured so that students worked on mathematics, composition, spelling and writing every morning. The sequence of this work was determined individually by each student. The program of activities in each of these areas was cooperatively planned by the student and the teacher with the teacher checking the work as it was completed; this evaluation became the basis for planning future assignments. (Each student kept track of his completed work in an individual folder.) When the student completed his prescribed work in these four areas he selected additional work from any of the skill or special interest centers established throughout the room. The afternoon was devoted to reading and work in basic skills or special activities.

Each student had an individual conference with the teacher every Friday. Based on this, an evaluation of the week's work (academic and social) was written and sent home accompanied by the student's written assignments. There was space on this weekly-evaluation form for parents to respond to the teacher's comments, and at least 90 percent did so on a regular basis.

Because of its individualized focus, students within this classroom competed with themselves and not against their peers. This had several consequences in student behavior. Students felt free to ask for help

or give it to others. In fact, they were encouraged to do so by the teacher. The special strengths of each student were recognized and capitalized upon. Those students who needed help in one academic area found that they could be of help in another. Students who were incapable of providing assistance in academic areas found other situations within the classroom where they could contribute. Work in special areas such as art, music, or work on special projects provided such an outlet. Throughout the entire program students saw peers as well as the teacher as facilitators who could be turned to for assistance in a variety of situations.

A demographic breakdown of the students in the room indicated that 53 percent of them were in the fifth grade (seven males and nine females); 16 percent fourth grade (four males, one female); and 30 percent third grade (five males and four females). Twenty-seven percent of the class members were black (eight students).

Other demographic variables hypothesized to be determinants of helping behavior were sibling order and family socioeconomic status. Sibling order was determined by interviewing all pupils in the class. There were no only-children in the room. Twenty-four percent of the students were the oldest in their families, 45 percent were the middle child, and 31 percent were the babies of the family. Socioeconomic status was determined through application of Warner's Revised Scale for Rating Occupations (21). This scale takes into account source of income as well as degree of skill and the assigned prestige value of a job. Using Warner's seven-point scale, students in this class were distributed across occupational class lines in the following manner:

Occupation Level	Percent of Students
1 (Professionsals)	50%
2 (Semi-professionsals)	17
3 (Clerks & kindred workers)	20
4 (Skilled workers)	0
5 (Service & protective workers)	13
6 (Semi-skilled workers)	0
7 (Unskilled workers)	0

Because of the homogeneous nature of this class, socioeconomic status was not used in analysis of data.

Instruments:

Three times during the year students completed the Ohio Social Acceptance Scale, the Battle Student Attitude Scale (Form B), and Coopersmith's Self-Esteem Inventory. Instruments were scheduled in this manner to determine if changes in observed rate and type of participation in peer helping relationships resulted in changes in documented attitudes and behaviors.

The Ohio Social Acceptance Scale was used to provide a sociometric rating of all pupils by all other pupils. This instrument was developed cooperatively by the Evaluation Division of the Bureau of Educational Research, Ohio State University, and a group of elementary teachers (12). Studies conducted using the scale indicated that it had high consistency with teacher and parent judgments as to the social acceptance of individual students (13). This instrument contains five paragraphs describing degree of friendship on a continuum from "My very, very best friend" to "Dislike them". Each student is presented with a copy of the five descriptions and a class role. They are asked to assign a number representing one of these descriptive paragraphs next to each student's name as it appears on the role. Scores are derived for each student with a low score indicating

greater acceptance by peers.

The Battle Student Attitude Scale (Form B) is an elementary form of an instrument developed as part of the Kellogg-Florida Leadership Project (1). Validity of the original instrument was defined in terms of correlation with two previously existing student attitude scales. Battle (1) also found that scores obtained on his instrument differentiated between classes and between schools in accordance with teacher and research team judgments. Split-half reliabilities varied from .88 to .94. The elementary form (B) of this instrument was developed and validated by the research staff at the P.K. Yonge Laboratory School, University of Florida. Using point biserial techniques, all questions on this form were found to correlate with the secondary form at least at the .05 level with most test items displaying even higher levels of correlation. The Battle Student Attitude Scale (Form B) consists of 58 negatively stated items covering attitudes toward self, other pupils, teachers, and school. Students respond to each of these statements on a three-point scale as "most true", "sometimes true", or "mostly false" with a high score indicating a positive attitude toward school.

The shortened form of the Coopersmith Self-Esteem Inventory (5) was used as a self-report on student self-concept. This instrument consistes of 25 items of either positive or negative substantive meaning. The respondent checks either "like me" or "unlike me" to each of these. This instrument has been used in numerous studies including some on tutoring programs.

At the beginning and end of the school year the classroom teacher

completed the Florida Key on each student. This is a measure of inferred learner self concept. The instrument consists of eighteen descriptions of classroom behaviors such as "speaks up for his own ideas?" or "gets along with other students?". The teacher rates each student according to the frequency with which the specified behaviors have been observed. The Florida Key is constructed on a six-point scale with five being the score or highest frequency. The higher the total score the higher the inferred learner self concept of the student. A total split half reliability coefficient of .93 and an interrater reliability of .84 have been obtained for this instrument (11).

Observations:

Microethnographic techniques were used to record student involvement in a variety of peer helping relationships. The researcher spent time in the single classroom observing and recording patterns of student interactions with a focus upon peer helping relationships. Initially it had been anticipated that either an observation form could be located or developed which would permit easy categorization of helping behaviors. An observation instrument was not located and the effort to develop one was abandoned for a number of reasons. As the researcher developed a narrative description of the ongoing life of the classroom, it became increasingly clear that valuable insights into student behaviors and motivations could easily be lost through utilization of a standardized instrument. Also, it was not clear at the beginning of the project what types of student interactions could be classified as helping. A quick survey of a group of elementary teachers did generate a list of helping behaviors, but they were so general and unrelated to the social context

of the classroom that they did little but provide a guiding light to what might be found in this study. It was also felt that the narrative description that would be developed as a consequence of this study might provide clues for needed additional research. For the above reasons, the researcher continued to record classroom observations in a narrative style. But because one of the objectives of this study was to categorize helping behavior and rank students' involvement in them, a listing of student interactions was developed from the observations (Chart 1) and translated into a check sheet. Each student's interactions were thus able to be plotted.

The authors admit that the microethnographic technique used does not permit the capturing of the totality of a student's interactions. No claim is made that this was even attempted. This would not have been possible in a classroom in which each student had an assigned seat, much less in a room in which students were free to move about and communicate with each other at will. However, it is felt that the indepth observation of the classroom over time permitted patterns of student interactions to become evident, with each reflecting his own style of relating to others. While a student may have been omitted from the observation record on any particular day, it was the pattern of his helping behavior that was of concern. To guard against missing a student on a regular basis, it was finally decided that students included in one day's narrative would be checked off a class role so that those students who had been missed could be identified. As an additional check upon the accuracy of these observations, the teacher was asked to rank the students from high to low on their helping behavior. There was a high level of agreement be-

tween the two independently developed rankings.

Procedures:

Based on the model developed by Smith and Geoffrey (18) the present research was designed as a cooperative effort between researcher and classroom teacher. Both participated in the formulation of the research plan. Once a month throughout the school year the teacher was provided with a substitute so that the two could meet and discuss the study's progress. Analysis and interpretation of data occurred during these meetings. Both raised questions about the relationships among students and their meanings in the context of the classroom environment.

The researcher was present in the classroom on the first day of school, and was introduced to the students as someone who was interested in describing their activities. Because this school is associated with a major university, the students were accustomed to outsiders and quickly accepted this presence. They remained fasinated, however, by the speed with which notes were taken; they frequently paused and commented on this fact.

While the observations were an ongoing feature of this study, the instruments previously described were scheduled for administration in mid-September, early January and late May. This report presents an analysis of the data collected in the first three-quarters of the study.*

Results

An analysis of the narrative-style observations yielded a listing of helping behaviors and other types of classroom interactions. These

* A research monograph on the complete study will be available upon request mid-summer 1974 by writing to Dr. J. B. Hodges, Director, P.K. Yonge Laboratory School, University of Florida, Gainesville.

are reported in Chart 1. Thirteen peer helping relationships were noted, with only three of these involving the asking for help. A student would ask another for help with a specific academic problem, for clarification of an assignment, or to be handed a pen, pencil, etc. Students provided help spontaneously, at the request of another student, or upon the request of the teacher. The teacher was also involved in providing academic or clarification assistance to pupils. In this particular classroom the majority of these teacher-pupil relationships were on a one-to-one basis or in small groups of three to four.

A variety of peer relationships and teacher-pupil relationships, other than those of a specifically helping nature, were also recorded. These interactions were included because they provided a broader framework in which to examine the roles students occupied within the classroom.

A frequency count on these interactions indicated that the three most commonly reported student behaviors were: working alone, but at a location close to other student(s); interacts socially with those students sitting near while working on own assignments or projects; and, separates self from other students to work. While these three behaviors have little to do with helping per se they do give some of the flavor of the classroom. It was casual and relaxed with the majority of the students busily engaged in completing their assignments. At the same time, there was a low hum of noise in the room as students carried on subdued conversations or made casual remarks as they worked.

Also having a high frequency of occurance was "works cooperatively in a group on a project". This classroom was structured so that there were many opportunities for these types of behaviors to occur; all

students had at least several of them recorded beside their name. Other instances of especially high helping were recorded in the following situations: (1) helps another student with academic work/impossible to tell who initiated the interaction; (2) asks another student for academic help; (3) helps other students with their academic work at their request; and, (4) asks another student for clarification of an assignment.

All pupil-pupil observations were categorized as being either same-sex or cross-sex, same-age or cross-age, and same-race or cross-race. An examination of the interaction patterns for all class members revealed that there were two distinct social systems operating within the room. These two systems developed not along age or racial lines but upon sexual differences. There were two basic types of situations in which the sexes interacted with each other. A student would willingly help a member of the opposite sex upon request of the teacher. While there appeared to be no hesitancy to engage in this type of interaction, it did no occur spontaneously. There was one situation in which spontaneous cross-sexual helping behaviors did occur. There was a girl in the class confined to a wheel chair. Boys, as well as girls, volunteered to help her in a wide variety of ways; most common were the fetching of books or pens and paper or pushing the wheel cahir to lunch, the library, etc. But again, academic helping happened at the instigation of the teacher.

Before a presentation of the analysis of the data, there were a few general observations which warrant mentioning. There were a couple of students in this class who experienced more difficulty than others in settling down to work. At the slightest provocation they would wander around the room to see what others were doing. (They appeared to be careful not to

disturb those students who were engrossed in some activity.) The saving grace of this behavior was that in their travels they generally found other students who could use their help. There were several things that seemed important in this behavior. One, was that after helping someone else these students would generally return to their seats and resume their own work. Secondly, the observer was struck by the intense need that accompanied this inability to sit still; it was as though they were driven to get up and move about, if only for a few seconds. Surely there are many students with similar needs assigned to classes which do not permit this freedom of movement? One must question how they cope with their classroom.

Use of space within the classroom varied by students. While most sought out quiet corners for work requiring concentration, there were three students who nearly always preferred to by physically removed from others while working. These students were not antisocial nor unpopular. They just liked to be tucked away in corners by themselves. Other students liked to be close to others, but removed by several feet. Groups of students also staked out particular locations within the room to which they would retreat when given the opportunity. Most notable of these was the group of girls who claimed the small room off of the regular classroom. This room had originally been a teacher's office, but the need for additional classroom space had preempted it. These girls guarded this room as jealously as any animal ever did his lair. Students thus divided up the space within the classroom in their own individualistic way. The provision of areas in a room in which students can either seek solitude or experience a sense of belonging appear to be important dimen-

sions of a classroom. This need may be even more important in classes which have removed the desks which once students claimed as their own.

As a last consideration, there are those students who display a great need for attention from the teacher. This attention may take the form of requests for academic help or approval of completed work. Students who fit this description are just as apt to be good students as poor ones. Many of these students seek help from peers only when it is impossible to get the teacher's attention. From other behaviors, these students seem unsure of themselves and like the constant reassurance of the teacher that they are meeting expected standards. It cannot be assumed that good students are automatically self-confident.

Students were ranked from high to low on their participation in helping relationships. This ranking took into account academic and social participation. Tables 1 and 2 present the rankings of females and males on helping and their mid-year scores on the other measures. A Spearman rank order correlation coefficient was computed for sets of these data.

Insert Table 1 about here

Insert Table 2 about here

When helping was ranked for the entire class it was not found to be significantly correlated with any of the other measures. This finding ran counter to the impression received after spending a lot of time in the

classroom. When other evidence indicated that the males and females were maintaining basically separate social systems, the collected data were ranked for each sex separately. For females, helping was correlated at the .05 level (r=.61, df=11) with attitude toward school and at the .01 level (r=.71, df=11) with social acceptance. For males, helping was correlated at the .05 level with self-esteem (r=.52, df=14). Thus, helping was reacting differentially with various measures for each sex. It can by hypothesized that differences within the male and female social structures contributed to these findings. For instance, the girls maintained a tight clique network; they tended to have a few close friends with whom the majority of their interactions occurred. While boys also had close friends, their relationships did not appear to be as exclusive as those of the females.

Further differences between males and females were explored by examining, with t-tests, their responses on the various measures. Both groups were very similar in their attitude toward school, learner self-concept, and self-esteem; the females were slightly more positive on the first two of these measures and the males slightly more positive on self-esteem. Means on these measures were:

School attitude:	males	133.43
	females	139.85
Learner self-concept:	males	71.56
	females	72.85
Self-esteem:	males	17.24
	females	15.47

There was a significant difference, however, between the social acceptance scores of males and females ($t=3.086$, $p<.01$). The males were more

accepting and accepted than the females (mean: males - 78.56; females - 94.50). Again, it is hypothesized that the social structure among the females contributed to this response pattern. Additionally, many of the girls had a tendency to physically remove themselves from the activities of other classmates by seeking rooms with doors or isolated corners in which to work.

The exclusiveness of the relationships among girls raises the issue of sexual differences in channeling of aggression. This question, along with its concomitant consequences, is worthy of additional investigation.

A series of Spearman rank order correlation of coefficients were computed for the total class on the rankings of all measures other than "helping". Those correlations which were found to be significant were: (1) school attitude and inferred learner self-concept, $p < .01$ ($r = .54$, $df = 27$); (2) school attitude and self-esteem, $p < .01$ ($r = .57$, $df = 27$); and, (3) self-esteem and inferred learner self-concept, $p < .05$ ($r = .44$, $df = 27$). The relationships betweenattitude toward school and the self concept measures are a recurring theme and deserve further exploration, especially as they relate to academic performance. (The final report on this study will present data on this issue.)

The effects of this type of open classroom on various measures was a prime concern in this study. Changes recorded between the administration of the first two sets of instruments (four months) were analyzed using t-tests. These results are presented in Table 3.

Insert Table 3 about here

There was no significant change in the social acceptance levels of the class members. Members also maintained relatively the same rank in social acceptance over these four months as evidenced by a Spearman rank order correlation of coefficient ($r=.796$, $df=27$, $p<.001$). There was a significant growth ($p<.05$), however, in school attitude and self-esteem. For the particular students within this room, their educational experience appears to have been positive.

Because there were third, fourth, and fifth grade students within this room, questions were raised about the differences on measures which might be attributable to grade level. A series of two-way analyses of variance were performed controlling for grade and sex. School attitude was the only measure which showed an interaction effect. Table 4 presents the source breakdown of the simple effects. A Tukey's test on the cell means found that fourth grade males had significantly ($p<.05$) higher school attitude than fourth grade females or third grade males; fifth and third grade females also had a significantly ($p<.05$) higher school attitude than the fourth grade females. Fourth grade males and fifth grade females led the class in school attitude.

Insert Table 4 about here

One final concern revolved around sibling order. All children within this room had siblings. Did their position among the other children in their families lead to varying rates of helping? Because n's were small, it is impossible to make conclusions based only on the behavior of students within this single classroom. There was a definite trend among third and fifth graders for the last child in a family to be

a high helper within the classroom; over 50 percent of the high helpers in these grades were last children. It is possible that, at home, these students have generally been on the receiving end of help and enjoy the opportunity to help others in turn. There were not enough fourth graders in the room for a pattern to emerge among them.

There were no differences in participation in helping behavior between the black and white students. Each group had equally as many high helpers as low. In a breakdown by sex, exactly half the males and half the females were ranked high in helping.

Conclusions

Helping occurs with a high frequency in a classroom where this behavior is encouraged and rewarded. Slightly more interactions occur across age lines as among students in the same grade; older students are perceived by younger ones as a resource. Cross-race interactions are nearly as frequent as those among students of the same race. There were almost no cross-sexual interactions within the classroom.

A student's expertise was quickly recognized by his peers and his help solicited in situations where it was appropriate. Thus, a student would be asked for help in a specific academic or problem area.

Helping behavior is correlated with different measures for males and females. Engaging in peer helping relationships does seem to have some positive effects in relation to school attitude, social acceptance by peers, and self-esteem.

The environment provided in this classroom led to significant increases in school attitude and self-esteem. A student's position within

the social acceptance network, however, remained stable throughout the period covered in this paper.

This study has probably raised more questions than it has answered about the life in an open classroom. Some of these will be discussed in the final report. Other questions which this study has generated are: (1) the proxemics, or space utilization, within classrooms and the way it affects interpersonal relationships and academic achievement; and (2) sexual differences in the channeling of aggressions, which has broad implications.

CHART 1
CLASSROOM INTERACTION BEHAVIORS

Helping Behaviors

Peer Relationships

Asks peers for help -

1. Asks another student for help with academic subject or class project
2. Asks for clarification of assignment or information about an assignment from another student.
3. Asks another student for material retrieval (pen, pencil, etc.).

Provides help to peers -

1. Helps student nearby with academic work/impossible to tell who initiated interaction.
2. Volunteers academic help to another student.
3. Retrieves materials for other students at their request.
4. Helps other students handle social or physical environment at request of another student.
5. Helps other students handle social or physical environment on own initiative.
6. Helps other students with academic work at request of the student.
7. Provides information or clarification to another student on own initiative.
8. Defends another student from a challenge, accusation or threat from a third student.
9. Helps another student with academic work at request of teacher.
10. Retrieves materials for other students at request of teacher.

Teacher-Pupil Relationships

1. Asks teacher for help with academic work.
2. Asks teacher for approval of work that has been done.
3. Asks teacher or other adult in room for clarification of assignment or for information.

Other Types of Interaction

Peer Relationships

1. Works alone but at location close to other student(s).
2. Separates self from other students to work.
3. Interacts socially with those students near while working on projects (school) assignments).

Teacher-Pupil Relationships

1. Seeks physical contact with teacher (likes to touch, rub, play with hair, etc.)
2. Runs errands for teacher and does things like erase board, open windows, etc. at her request.

4. Shows work accomplished to other pupils for their reaction/not seeking help but positive regard.
5. Seeks physical contact with other students (likes to touch, rub, play with hair, etc.).
6. Challenges, accuses, or threatens another student.
7. Defends self from a challenge, accusation, or threat from another student.
8. Works cooperatively with other students on projects not academic (art, music, mechnacial, etc.).
9. Wanders around the room looking at what others are doing, but not really stopping and becoming involved.
10. Runs errands for teacher and does things like erase board, open windows, etc. on own initiative.

Demographic Characteristics of Student Interactions

Same-race interaction	Cross-race interaction
Same-sex interaction	Cross-sex interaction
Same-age interaction	Cross-age interaction

Table 1

RANKING OF FEMALES ON HELPING, SCHOOL ATTITUDE, SOCIAL ACCEPTANCE, SELF-ESTEEM AND INFERRED LEARNER SELF-CONCEPT

	Rankings				
Students	Helping	School Attitude	Social Acceptance	Self Esteem	Learner Self-Concept
L.B.	8.5	11	5.5	10	7.25
C.C.	2	5	2	5	2
G.E.	8.5	7	7.5	4.5	3
T.F.	13	12.5	13	12	7.25
T.L.	11	12.5	12	11	13
G.M.	10	3	5.5	6.5	6
C.M.	5	6	3.5	2	7.25
M.M.	12	9	11	4.5	12
G.Q.	6	4	3.5	1	1
J.R.	3	10	10	13	7.25
M.S.	1	2	1	8.5	5
R.S.	7	8	9	6.5	4
E.P.	4	1	7.5	3	11

Table 2

RANKING OF MALES ON HELPING, SCHOOL ATTITUDE, SOCIAL ACCEPTANCE, SELF-ESTEEM AND INFERRED LEARNER SELF-CONCEPT

	Rankings				
Students	Helping	School Attitude	Social Acceptance	Self Esteem	Learner Self-Concept
R.A.	7	13	13	15	10
S.A.	2	2	1	1.5	4
T.C.	10	11.5	10	13	8
H.C.	13	15	9	14	16
B.D.	9	10	6.33	4.25	3
A.F.	4	9	3	10.5	9
R.J.	8	6	15	10.5	5
M.J.	3	7.5	14	7.33	11
D.M.	1	7.5	4	4.25	7
D.[redacted]	11	3	2	7.33	6
P.P.	5	16	11	12	12
B.P.	6	14	5	13	15
C.R.	16	11.5	16	7.33	14
J.R.	14	1	6.33	1.5	2
E.W.	12	4	6.33	4.25	1
J.Z.	15	5	12	4.25	13

Table 3

CHANGES IN SOCIAL ACCEPTANCE, SCHOOL ATTITUDE AND SELF-ESTEEM
SEPTEMBER TO JANUARY

Social Acceptance:	t= -1.18
mean in September -	2.81
mean in January -	2.88
School Attitude:	t= 2.11*
mean in September -	131.33
mean in January -	137.37
Self-Esteem:	t= 2.66*
mean in September -	15.15
mean in January -	17.19

n=29
*p < .05

Table 4

SIMPLE EFFECTS FOR SCHOOL ATTITUDE
BY SEX AND GRADE LEVEL

Source	SS	df	MS	F
(Sex)				
at 3rd grade	1,269.36	1	1,269.36	5.58*
at 4th grade	2,553.80	1	2,553.80	11.22**
at 5th grade	540.32	1	540.32	2.37
(Grade)				
at male	3,554.31	2	1,777.16	7.81**
at female	1,744.71	2	872.36	3.83*
Sex x Grade	5,765.99	2	2,883.00	12.67
Within	5,460.63	24	227.53	

*p < .05
**p < .01

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